

## General

### Title

Perinatal care: proportion of mothers of infants with gestational age between 24 and 33 completed weeks receiving IM or IV corticosteroids (betamethasone, dexamethasone, hydrocortisone) at any time prior to delivery.

### Source(s)

Vermont Oxford Network. Proportion of mothers receiving antenatal steroids. Burlington (VT): Vermont Oxford Network; 2015. 4 p.

## Measure Domain

### Primary Measure Domain

Clinical Quality Measures: Process

### Secondary Measure Domain

Does not apply to this measure

## Brief Abstract

### Description

This measure is used to assess the proportion of mothers of infants with gestational age between 24 and 33 completed weeks receiving intramuscular (IM) or intravenous (IV) corticosteroids (betamethasone, dexamethasone, hydrocortisone) at any time prior to delivery.

### Rationale

Preterm birth is a major risk factor for mortality, respiratory distress syndrome, intraventricular hemorrhage, necrotizing enterocolitis and other serious complications in newborns, and rates of preterm birth have risen in recent decades (Bonanno & Wapner, 2009). Corticosteroids accelerate the maturation of fetal lungs in the premature infant (Liggins & Howie, 1972). Administration of corticosteroids to the mother prior to preterm delivery has been shown to decrease incidence and severity of respiratory distress syndrome, intracranial hemorrhage, necrotizing enterocolitis, and death in the infant (Roberts &

Dalziel, 2006). The American College of Obstetricians and Gynecologists (ACOG) guidelines recommend a single course of corticosteroids for pregnant women 24 to 34 weeks of gestation who are at risk of preterm delivery within 7 days (ACOG & Committee on Practice Bulletins—Obstetrics, 2012; ACOG Committee on Obstetric Practice, 2011). The percentage of all mothers whose infants are born less than 34 weeks who received any corticosteroids prior to delivery is an important measure of the quality of care delivered to neonates. This measure has been developed and is in current use by the Vermont Oxford Network.

## Evidence for Rationale

ACOG Committee on Obstetric Practice. ACOG Committee Opinion No. 475: antenatal corticosteroid therapy for fetal maturation. *Obstet Gynecol.* 2011 Feb;117(2 Pt 1):422-4. [PubMed](#)

American College of Obstetricians and Gynecologists, Committee on Practice Bulletins—Obstetrics. ACOG practice bulletin no. 127: Management of preterm labor. *Obstet Gynecol.* 2012 Jun;119(6):1308-17. [PubMed](#)

Bonanno C, Wapner RJ. Antenatal corticosteroid treatment: what's happened since Drs Liggins and Howie?. *Am J Obstet Gynecol.* 2009 Apr;200(4):448-57. [PubMed](#)

Liggins GC, Howie RN. A controlled trial of antepartum glucocorticoid treatment for prevention of the respiratory distress syndrome in premature infants. *Pediatrics.* 1972 Oct;50(4):515-25.

Roberts D, Dalziel S. Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth. *Cochrane Database Syst Rev.* 2006 Jul 19;3:CD004454. [69 references] [PubMed](#)

Vermont Oxford Network. Proportion of mothers receiving antenatal steroids. Burlington (VT): Vermont Oxford Network; 2015. 4 p.

## Primary Health Components

Perinatal care; antenatal steroids

## Denominator Description

Eligible mothers of all infants admitted within 28 days of birth without having been discharged home whose gestational age is between 24 and 33 completed weeks, including mothers of infants who died in the delivery room (see the related "Denominator Inclusions/Exclusions" field)

## Numerator Description

Number of mothers who received antenatal steroids (see the related "Numerator Inclusions/Exclusions" field)

## Evidence Supporting the Measure

## Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A systematic review of the clinical research literature (e.g., Cochrane Review)

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## Additional Information Supporting Need for the Measure

Unspecified

## Extent of Measure Testing

Unspecified

## State of Use of the Measure

### State of Use

Current routine use

### Current Use

not defined yet

## Application of the Measure in its Current Use

### Measurement Setting

Hospital Inpatient

### Professionals Involved in Delivery of Health Services

not defined yet

### Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

### Statement of Acceptable Minimum Sample Size

Unspecified

### Target Population Age

Unspecified

## Target Population Gender

Female (only)

# National Strategy for Quality Improvement in Health Care

## National Quality Strategy Aim

Better Care

## National Quality Strategy Priority

Health and Well-being of Communities

Prevention and Treatment of Leading Causes of Mortality

# Institute of Medicine (IOM) National Health Care Quality Report Categories

## IOM Care Need

Staying Healthy

## IOM Domain

Effectiveness

# Data Collection for the Measure

## Case Finding Period

Calendar year (January 1 through December 31)

## Denominator Sampling Frame

Patients associated with provider

## Denominator (Index) Event or Characteristic

Institutionalization

Patient/Individual (Consumer) Characteristic

## Denominator Time Window

not defined yet

## Denominator Inclusions/Exclusions

### Inclusions

Eligible mothers of all infants admitted within 28 days of birth without having been discharged home whose gestational age is between 24 and 33 completed weeks, including mothers of infants who died in the delivery room

*Population:* Mother of any infant who is admitted to the reporting hospital and whose gestational age is between 24 weeks, 0 days and 33 weeks, 6 days should be included, regardless of where in the hospital the infant receives care.

Note: Refer to the original measure documentation for calculation instructions and data item definitions. For administrative coding and additional data item information, refer to the *2016 Manual of Operations: Part 2 Data Definitions & Infant Data Forms* (see the "Companion Documents" field).

### Exclusions

- Mothers of infants outside the gestational age range of 24 to 33 weeks
- Mothers of infants admitted more than 28 days after birth
- Mothers of infants who have been home prior to admission

## Exclusions/Exceptions

not defined yet

## Numerator Inclusions/Exclusions

### Inclusions

Number of mothers who received antenatal steroids

Note: Refer to the original measure documentation for additional information.

### Exclusions

Unspecified

## Numerator Search Strategy

Institutionalization

## Data Source

Paper medical record

## Type of Health State

Does not apply to this measure

## Instruments Used and/or Associated with the Measure

Unspecified

# Computation of the Measure

## Measure Specifies Disaggregation

Does not apply to this measure

## Scoring

Rate/Proportion

## Interpretation of Score

Desired value is a higher score

## Allowance for Patient or Population Factors

not defined yet

## Description of Allowance for Patient or Population Factors

Gestational age, birth weight, inborn/outborn status

## Standard of Comparison

not defined yet

# Identifying Information

## Original Title

Proportion of mothers receiving antenatal steroids.

## Measure Collection Name

Perinatal Care Measures

## Submitter

Vermont Oxford Network - Health Care Quality Collaboration

## Developer

Vermont Oxford Network - Health Care Quality Collaboration

## Funding Source(s)

None

## Composition of the Group that Developed the Measure

Neonatologists

## Financial Disclosures/Other Potential Conflicts of Interest

None

## Adaptation

This measure was not adapted from another source.

## Date of Most Current Version in NQMC

2015 Jan

## Measure Maintenance

Unspecified

## Date of Next Anticipated Revision

Unspecified

## Measure Status

This is the current release of the measure.

## Measure Availability

Source not available electronically.

For more information, contact the Vermont Oxford Network, 33 Kilburn Street, Burlington, Vermont, 05401; Phone: 802-865-4814; Fax: 802-865-9613; Email: [mail@vtoxford.org](mailto:mail@vtoxford.org); Web site: <https://public.vtoxford.org/> .

## Companion Documents

The following is available:

Vermont Oxford Network. 2016 manual of operations: part 2 data definitions & infant data forms. Release 20.0. Burlington (VT): Vermont Oxford Network; 2015 Oct. 93 p. This document is available from the [Vermont Oxford Network Web site](#) .

## NQMC Status

This NQMC summary was completed by ECRI Institute on February 2, 2016. The information was verified

by the measure developer on March 16, 2016.

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## Production

## Source(s)

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## Disclaimer

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